

AMENDMENTS TO THE CLAIMS

Claims 1-18 remain pending in the application. Please amend claims 7-14.

Claims 19-21 have been added. Claims 1-6 have been canceled without prejudice.

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-6. (Canceled)

7. (Currently Amended) A load coil, comprising:

a coupled inductor having an inter-winding capacitance, an intra-winding capacitance, and an inductance $[[;]]$, wherein the ratio of the inter-winding capacitance to the intra-winding capacitance being in the range of about 0.75 – 1.25 for increasing the impedance of the load coil to signals in the range of 25 kHz – 1.1 MHz.

8. (Original) The load coil according to claim 7, wherein the ratio of the inter-winding capacitance to the intra-winding capacitance is in the range of about 0.99 to 1.01

9. (Original) A load coil, comprising:

a first inductor including a first winding and a first core, the first winding having upstream and downstream ends and a first intra-winding capacitance;

a second inductor including a second winding and a second core, the second winding having upstream and downstream ends and having a second intra-winding capacitance;

a first capacitor disposed between the upstream end of the first inductor and the downstream end of the second inductor to offset at least a portion of the first and second intra-winding capacitances for improving the impedance of the load coil to DSL-band signals; and

a second capacitor disposed between the upstream end of the second inductor and the downstream end of the first inductor to offset at least a portion of the first and second intra-winding capacitances for improving the impedance of the load coil to DSL-band signals.

10. (Original) A load coil for being coupled to a local loop to improve transmission of POTS band signals over the local loop, comprising:

a first inductor having a first winding and a first core, the first inductor for improving transmission of POTS band signals on a first wire of the local loop; and

a second inductor having a second winding and a second core for improving transmission of POTS band signals on a second wire of the local loop.

11. (Currently Amended) A DSL repeater for improving transmission of POTS band and DSL band signals over a local loop, the repeater comprising:

an upstream signal amplifier for amplifying upstream DSL signals;
a downstream signal amplifier for amplifying downstream DSL signals; and
a load coil disposed in parallel with the upstream and downstream signal amplifiers for improving the transmission of POTS band signals over the local loop,
wherein the load coil having one or more capacitors electrically connected in parallel with an inter-winding capacitance between windings of the load coil.

12. (Currently Amended) The DSL repeater according to claim 11, wherein the load coil further comprises:

a coupled inductor having a first winding having a first intra-winding capacitance and a second winding having a second intra-winding capacitance, the first and second windings wound about an inductor core, the first and second windings having an inter-winding capacitance; and

a first capacitor disposed in parallel with the interwinding capacitance between the first winding and the second winding and a second capacitor disposed in parallel with the interwinding capacitance between the second winding and the first winding for increasing the impedance of the load coil to the upstream and downstream DSL signals.

13. (Currently Amended) The DSL repeater according to claim 12, wherein a ratio of the combined inter-winding capacitance and the first capacitor to the ~~combined~~

capacitance of the first intra-winding capacitance ~~and the first capacitor~~ is in the range of 0.75 – 1.25.

14. (Currently Amended) The DSL repeater according to claim 12, wherein a ratio of the combined inter-winding capacitance and the first capacitor to the ~~combined~~ capacitance of the first intra-winding capacitance ~~and the first capacitor~~ is in the range of 0.99 – 1.01.

15. (Original) The DSL repeater according to claim 12, wherein the first and second capacitors each have a capacitance in the range of 770 – 1290 pF.

16. (Original) The DSL repeater according to claim 12, wherein the inter-winding capacitance is in the range of 1,030 – 1,050 pF and the capacitance of each of the first and second capacitors is in the range of 770 – 1290 pF.

17. (Original) The DSL repeater according to claim 11, wherein the load coil further comprises:

a first inductor having a first winding and a first core, the first inductor for improving transmission of POTS band signals on a first wire of the local loop; and

a second inductor having a second winding and a second core for improving transmission of POTS band signals on a second wire of the local loop.

18. (Original) The DSL repeater according to claim 11, wherein the load coil further comprises:

a first inductor including a first winding and a first core, the first winding having upstream and downstream ends and a first intra-winding capacitance;

a second inductor including a second winding and a second core, the second winding having upstream and downstream ends and having a second intra-winding capacitance;

a first capacitor disposed between the upstream end of the first inductor and the downstream end of the second inductor to offset at least a portion of the first and second intra-winding capacitances for improving the impedance of the load coil to DSL-band signals; and

a second capacitor disposed between the upstream end of the second inductor and the downstream end of the first inductor to offset at least a portion of the first and second intra-winding capacitances for improving the impedance of the load coil to DSL-band signals.

19. (New) An apparatus, comprising:

means for passing a first type of signal having a frequency greater than twenty kilohertz of across a coupled load coil that has a first winding, a second winding and a capacitive element disposed in parallel with an inter-winding capacitance between the first winding and the second winding; and

means for passing a second type of signal in a voice frequency range across the load coil at the same time as the first type of signal pass through the load coil regardless of

whether the second type of signal was transmitted in the same direction in relation to the load coil as the first signal, wherein the capacitive element has a capacitance value that is at least four times the inter-winding capacitance value between the first winding and the second winding to permit passage of the first type of signal across the load coil at the same time as the second type of signal.

20. (New) A method, comprising:

determining an inter-winding capacitance value of an inter-winding capacitance between a first winding and a second winding of a DSL-compatible load coil; and

determining a capacitance value for a capacitance in parallel with the inter-winding capacitance based on the inter-winding capacitance value to pass DSL signals.

21. (New) An apparatus, comprising:

means for determining an inter-winding capacitance value of an inter-winding capacitance between a first winding and a second winding of a DSL-compatible load coil; and

means for determining a capacitance value for a capacitance in parallel with the inter-winding capacitance based on the inter-winding capacitance value to pass DSL signals.